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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,884	07/18/2003	Michael A. Cosman	20947.NP	2744

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EXAMINER	
LUU, MATTHEW	

ART UNIT	PAPER NUMBER
3663	

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/622,884	COSMAN ET AL.	
	Examiner	Art Unit	
	LUU MATTHEW	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 39-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *45-51* is/are allowed.

6)☒ Claim(s) *1-4,39 and 44* is/are rejected.

7)☒ Claim(s) *40-43* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 39 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lancaster et al (US 2001/0027456) in view of Moore (US 2002/0145615) and Kang (6,266,068).

Regarding claim 1, Lancaster discloses a method for combining independent scene layers to form computer-generated environments, comprising the steps of:

constructing a terrain layer using stored terrain data (Section 30; section 31, lines 8-24; and section 40, lines 1-8);

generating a feature layer using feature layer data (Section 31, lines 16-17 "cultural data, an object library, for example, 3-D objects for natural and man-made structures"; and section 40, lines 21-23); and

combining the feature layer and the terrain layer to form a composite environment (Section 40, lines 13-23 "whereby: an x,y matrix for a surface geology layer... layers; then a georegistered database of roads and other human structures in overlain whereby these surfaces and features dominate over all previous layers.")

The only difference between the disclosure of Lancaster and the claimed invention is that claim 1 requires the "feature layer data that is stored separately from

the stored terrain data". Lancaster also fails to teach the new added limitation "using feature layer data that is configured to be modified independently".

However, Moore discloses (Figs. 1 and 4) a method of combining independent scene layers to from computer-generate environments. This method generates a background image layer at step (12) and stores this background image layer independently at step (14). This method also constructs a foreground image layer at step (18) and stores this foreground image layer separately at step (34). The stored background image layer (14) and stored foreground image layer (34) are combined at step (36).

Therefore, it would have been obvious to a person of ordinary skill in the art to use the method of storing different image layers independently into the method for combining the terrain layer with the feature layer of Lancaster to provide a method that creates and stores image layers separately. This method also combines these separately stored image layers as a later time.

Kang et al ('068), on the other hand, disclose (Figs 2-3) a various data sources of input image layers (204, 208 and 212), wherein the image-based layer (204) can be stored in the maps (206) separately from the video-based layer (208) stored in the maps (210). Kang further teaches modifying the object in a given input layer independently of other objects of another input layer (Column 11, lines 45-51).

Therefore, since both of Lancaster and Kang et al teach the methods of combining image layers from a various data sources (Lancaster, section 7), it would

have been obvious to the person of ordinary skill in the art to use separate storing maps (206 and 210) for storing image layers of Kang et al into Lancaster's method to provide a method that combines different image layers from different data sources in mixed model types as suggested by Kang et al (Column 2, lines 46-55).

Regarding claim 2, Lancaster discloses the step of rendering the composite environment for viewing (Sections 20 and 21).

Regarding claim 3, Lancaster further teaches the step of generating a plurality of feature layers (Section 40 ,lines 14-28).

Regarding claim 4, Lancaster discloses (Fig. 5, step 275) the step of determining the locations of features in the feature layer in reference to the terrain layer (Section 53, the last three lines; and section 55 "Next, at step 280, the datum from the surface data file at a geographic location point specifies the appropriate spatial density as a percentage cover for one or more 3-D object types, such as trees or buildings"). The trees or buildings can be considered the as the "features" on the feature layer.

Furthermore, it would have been obvious to the person of ordinary skill in the art to recognize that locations of features, such as roads, buildings, or trees, etc. must be specified in the composite image layers to allow a user to construct a computer-generated environments as desired by the user.

Regarding claim 39, Kang further teaches the step of rendering the composite environment for viewing further comprises the step of resolving conflicts such as "gaps" between layers by interpolation (Column 9, lines 15-33).

Regarding claim 44, Kang et al ('068), on the other hand, disclose (Figs 2-3) a various data sources of input image layers (204, 208 and 212), wherein the image-based layer (204) can be stored in the maps (206) separately from the video-based layer (208) stored in the maps (210). Kang further teaches modifying the object in a given input layer independently of other objects of another input layer (Column 11, lines 45-51).

Allowable Subject Matter

Claims 40-43 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 45-51 are allowed.

None of the prior art made of record teaches or suggests the step of rendering the composite environment for viewing further comprises the step of applying different run-time response rules to the terrain layer and the feature layer.

Response to Arguments

Applicant's arguments filed August 25, 2005 have been fully considered but they are not persuasive.

Regarding to the new limitation added to claim 1, "using feature layer data that is configured to be modified independently", Kang et al ('068), on the other hand, disclose (Figs 2-3) a various data sources of input image layers (204, 208 and 212), wherein the image-based layer (204) can be stored in the maps (206) separately from the video-based layer (208) stored in the maps (210). Kang further teaches modifying the object in a given input layer independently of other objects of another input layer (Column 11, lines 45-51).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUU MATTHEW whose telephone number is (571) 272-7663. The examiner can normally be reached on Flexible Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JACK KEITH can be reached on (571) 272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Luu

MATTHEW LUU
PRIMARY EXAMINER